#### Water as Sacred

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## Introduction

Water is a resource frequently taken for granted. However, without it we would be unable to survive. California Indians have developed a cultural appreciation for water that is reflected in the diverse cultures, languages, stories and songs of the region. From time immemorial there has existed an obligation to care for the gifts of the landscape. The gifts of plentiful natural resources are not only vital to our human well being but also of other organisms. Presumably, this relationship with water has existed for millennia with little change. However, the events following the arrival of Spanish, Mexican and American cultures have disrupted the roles and relationships between California Indians and water, and frequently the reciprocal respect for water has been lacking. At present, society as a whole grapples with the issues of developing a sustainable future for our water. Now is the time for California Indians to reassert themselves as caretakers of our vital resources. While ideal models of successful partnerships with indigenous communities regarding water may not exist in California, the successful development of an equitable and sustainable water future necessitates the inclusion of California Indians as a critical piece.

## Traditional Relationships to Water

Traditional laws recognized by Native California are based upon the natural order. First and foremost, the recognition that the law of the land dictates the relationship to the use and management of natural resources including water. A primary tenet of this recognition is that ownership of water or land by an individual or tribe is non-existent; rather, the individual or tribe belongs to the resource. With this said, the individual or tribe has a specific obligation to ensure the water and lands are cared for and respected, and the responsibilities for these areas are passed down from generation to generation. Rules broadly recognized throughout the land guided where people could and could not reside, swim, fish, or otherwise interact with water. Failure to abide by these laws could result in dire outcomes for those who disregarded them. In a landscape where seasonal and prolonged droughts have always been an issue, the development of cultural practices to ensure a sustainable use of water had to have been in place.

The cultural relationship to water is evident throughout California's diverse tribal communities. Water may be considered the backbone of tribal societies. Ancient tribal societies were organized into moieties or clans, which frequently had some reverence to water, and reference back to traditional law, whereby the members of that moiety or clan had responsibilities to look after matter pertaining to water. Nearly every tribe has traditional stories about water, which address issues from the origins of human beings to explaining the place one's ancestors depart to when deceased. Tribes have also recognized sacred water such as springs, wetlands, lakes, which serve as places for story, ceremony, healing, and other purposes. Under traditional law, these places are frequently those protected or not accessible by the general population of the tribe. Protection of these places ensured the long-term viability of the source, and ensured the quality of the water would be highest.

Academics have developed the terms environmental determinism and possibilism to describe human-environmental interactions. The former describes most tribal environmental relationships, whereby the development of the culture is reflected in the celebration of resources from the local environment. Conversely the later describes how a tribe has enhanced its environment to support its cultural needs.

Ancestral California Indians recognized the influences of their actions upon the environment. For example, the routine and patterned burning of the landscape was recognized to maintain flows in many streams, which today are seasonal. It was known that the burning of certain vegetation communities at the appropriate time would reduce evapotranspiration, thus enabling soil moisture to percolate deeper into the aquifer and enhance stream flows. This traditional knowledge application facilitated overall resource management further to ensure optimal conditions to support plants and animals, particularly fisheries.

A variety of associated culturally significant plants and animals exist, which historically were abundant but are now in decline (see table). While global declines in biodiversity are frequently linked to habitat loss, fragmentation, conversion, and exploitation; in the

case of many of our aquatic species factors of decline are frequently linked to habitat conversion, altered hydrology, altered water chemistry, and barriers to passage. The historic and contemporary declines of some species are more directly linked to environmental change. For instance salmonid fisheries existed along the west coast south to Baja California approximately 15,000 years ago. However, with warming following glaciation, the conditions suitable for salmonids to persist in many southern streams have disappeared. The cumulative impacts of continuing climate change, in-stream flows, barriers, and loss of estuarine rearing habitat all pose a threat to the persistent survival of these fish.

Species	Status	Significance
Sacramento Splittail	Delisted-rare	-Food
Chinook salmon (and others)	T/E	-Food
		-Spiritual
		-Important Ecosystem
		Component
Green Sturgeon	T	-Food
Bald Eagle	Delisted-rare	-Spiritual
California red-legged frog	T	-Spiritual
California tiger salamander	Т	-Food

Table depicts culturally significant species for Plains Miwok (Miwko) of the Delta region.

# Contemporary Relationships and Impacts

Due to the settlement history of California, California Indians have been displaced from traditional lands, and have generally become disconnected from opportunities to fulfill obligations to land and water. For many Tribal people, the fight to preserve cultural sites and culturally significant natural resources is a challenging and continual process. While the state constitution suggests water is a public resource not to be owned or sold, there are numerous actions carried out by federal, state, local, and private entities, which seem to operate counter to that notion. Where traditional societies protected and respected water resources, contemporary water managers appear to not value the holistic appreciation for water resources and associated features. To begin with, the reclamation of floodplains beginning in the mid-1800's destroyed ecosystems services such as water filtration and habitat for fish and wildlife. The advent of the various water projects throughout the state has led to conflict between indigenous peoples and the larger society over impacts to cultural sites, the use and abuse of water and associated biotic resources. The construction and management of dams has frequently created barriers to dispersal and destruction/alteration of habitat for culturally important fisheries and wildlife species. The prized fisheries of California streams have all been affected by the direct and indirect impacts of dam and water project operations. Where riparian and riverine habitats have remained, the fluvial processes, which sustained dynamic riparian and riverine ecosystems, have also been affected. Shaded riverine habitat, spawning gravel, and juvenile rearing grounds for fish have all been impacted by water management. A case in point is the Delta, where our endemic fishes (some of which are culturally significant) live a tenuous existence due to a lack of habitat, poor water quality, impingement in export facilities, and predation and competition by non-native species. Few of the aquatic systems across this state are in the pristine condition, which existed in pre-contact time. Where in pre-contact times one could reasonably expect clean drinking water from virtually any stream, we now must question the potability of water even in high mountain streams due to impacts from livestock, mining, and pesticide drift.

Much of contemporary water management issues tend to focus on the Delta. As a proposed means of improving water quality in the Delta and conserving fisheries and wildlife habitat new infrastructure improvements have been proposed (i.e., the Peripheral Canal). While there are valid reasons for and against such a system, it does not address the larger issues which continue to contribute to degraded water quality and habitat loss from source to sink. The choices our society makes for land use, waste disposal, etc. within the entire catchment all represent feedbacks to our water.

The lack of reciprocal respect for cultural sites and associated resources has put Tribal groups at odds with the self-proclaimed water resource managers. For instance, many reservoirs have been built (e.g., Shasta and Los Vaqueros), which have flooded cultural sites and impacted the storyscape. Respectful and reciprocal relationships for water management are generally lacking. While some tribal groups have developed working relationships with water and natural resource management entities primarily for access to sites for cultural purposes, the recognition of tribal people as partners in water and resource management is lacking. Similarly, respect for traditional ownership rights to land and water are broadly ignored, the rights of private individuals and corporations is furthering the abuse of water use privileges. Specifically, we see emerging markets where individuals and corporations seek profit from water transfers and water banking schemes, which provide little regard to impacts to the source or the long-term sustainability of the resource.

The problems associated with water infrastructure and management is further confounded by the fact that water is in fact a finite resource; our climate delivers a limited supply of snow, precipitation, and other forms of water to our landscape. Regardless of how many reservoirs, diversions, etc. that is built or manipulated, we cannot create more water. Despite this fact it is alarming that the population of California continues to grow at an alarming rate. During the drought crisis of the 1980's (when the voters of California first encountered the Peripheral Canal concept) the state population was about 20 million. Some sources suggest we barely had enough water to meet the demands of our population at that time. Some 20+ years later, the issue of water scarcity has not gone away, our supplies have not doubled, whereas our population is quickly approaching 40 million. As a society we have become better at water conservation, although there is certainly room for improvement.

Beyond these issues of water and resource management our aquatic systems are inundated with a diversity of non-native species and pathogens, which further degrade habitats and threaten the persistence of native species. The paths by which such invasive species and pathogens have arrived in our waters have been both intentional and inadvertent. Bullfrogs were introduced to our region as a commercial food resource. Sport fisheries have encouraged the management of some non-native species including striped bass, whereas other introduced fish including the northern pike draw continuous attention as a management concern. Inadvertent introductions of species such as New Zealand mudsnails (*Potamopyrgus antipodarum*) and Quagga mussels (*Dreissena rostriformis*) have been transported on the boats and equipment of anglers and other recreational users. Similarly, the dissemination of Chytrid fungus (*Batrachochytrium dendrobatidis*) has likely spread from waterbody to waterbody on contaminated equipment, and now threatens populations of amphibians.

## **Future Directions**

In consideration of the contemporary status of water and associated resources, it is foreseeable that Samuel Clemens' (Mark Twain) famous saying "Whiskey is for drinking, and water is for fighting over" may be taken to a new level. Specifically, if our fisheries vanish, the rivers and lakes are more degraded, and our water is owned and controlled by individuals or corporations, there will be just cause for uncivil acts; certainly this is not a phenomenon isolated to California. As a society, Californians need to assess and prioritize the past, present, and future of water. For Native Californians, this means asserting ancestral law, which is an obligation to care for the earth's resources. The fulfillment of this may take many steps including being active in land acquisition, conservation and stewardship; re-establishing water rights; and restoring impaired systems from the source to sink. It will also require forming partnerships with other tribes and public and private entities. Education is critical to ensure 1) that Tribal youth understand both traditional and academic aspects of natural resource management, and 2) that the broader society becomes familiar with the values Tribal societies place on natural resources. In the end, successful partnerships in collaboration or co-management should serve as a model.